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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/701,144

11/03/2003

Robert D. Christiansen

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EXAMINER

WILLS, LAWRENCE E

ART UNIT

PAPER NUMBER

2625

NOTIFICATION DATE

DELIVERY MODE

12/10/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/701,144	Applicant(s) CHRISTIANSEN ET AL.	
	Examiner LAWRENCE E. WILLS	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 11-15, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 6-10, 16-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. In view of the Appeal Brief filed on September 18, 2008, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 12, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christodoulou et al. (US Publication No. 2002/0102119) in view of Cuzzo (US Patent No. 5,129,049).

Regarding claims 1, 11, 12, and 19 Christodoulou'119 teaches a method for cooperative rasterization of print data in an enterprise network, the enterprise network including multiple printers (42A, 42B, 42C Figure 2B), the method comprising: rasterizing, by a primary printer (42A Fig. 2B) of the multiple printers, a portion of a print job to input raster bits into a raster buffer associated with the primary printer; (Step 508,510 or Step 526,530 in Figure 5A) identifying, by the primary printer, a potential underflow condition of the raster buffer (Step 506 in Figure 5A and Paragraph [0033]) the primary printer communicating an un-rasterized portion of the print job to the secondary printer 42B for the secondary printer to rasterize, the primary printer not rasterizing the un-rasterized portion; (Step 522, 528 in Figure 5A) receiving, by the primary printer, raster bits corresponding to the un-rasterized portion from the secondary printer; (Step 542 in Figure 5B) and printing, by the primary printer, all raster bits corresponding to the print job (Step 532, 544 in Figure 5B). Christodoulou further teaches the use of system software and computer programs to perform the cooperative rasterization of print data in an enterprise network, (Paragraph [0030]).

Christodoulou'119 fails to teach determining a time taken to rasterize the portion of the print job; the potential underflow condition occurring if the determined time taken to RIP the portion of the print job is greater than a time that will be taken by the primary printer to print the portion of the print job.

Cuzzo'049 teaches determining a time taken to rasterize the portion of the print job (each command is examined and its rasterization execution time is found, column 3, lines 43-45); identifying, by the primary printer, a potential underflow condition of the raster buffer (page protection sub-routine which prevents print overruns, column 4, line 42-55); the potential underflow condition occurring if the determined time taken to RIP the portion of the print job is greater than a time that will be taken by the primary printer to print the portion of the print job (printer overruns as a result of one or more strips requiring more rasterization time than PSRT, column 4, line 42-55, further, identify which page strip has an RET that exceeds the PSRT threshold for the page printer, and then prerasterizing those strips that exceed the threshold, column 4, line 42-55).

Having a system of Christodoulou'119 reference and then given the well-established teaching of Cuzzo'049 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Christodoulou'119 reference as taught by Cuzzo'049 reference, since the result of the combination would have been predictable and would have allowed for increased accuracy of raster processing.

With regard to claims 2 and 20, Christodoulou'119 teaches evaluating, by the primary printer 42A, whether communicating the un-rasterized portion to the secondary printer 42B would at least minimize the potential underflow condition; and only performing the communicating if the evaluating indicates that operations of the secondary printer to assist the primary printer in its rasterization operations would at

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least minimize the potential underflow condition. (Step 506 in Figure 5A and Paragraph [0033]).

With regard to claims 3 and 14, Christodoulou'119 teaches determining objective criteria comprising respective amounts of time for: the primary printer 42A to transmit the un-rasterized portion to the secondary printer 42B, the secondary printer to rasterize the un-rasterized portion, and the primary printer to receive the raster bits from the secondary printer, (See Step 506 in Figure 5A and Paragraph [0033]).

With regard to claims 4, Christodoulou'119 teaches the respective amounts of time are based on data persisted by the primary printer 42A, (Paragraph [0033])

With regard to claims 5 and 15, Christodoulou'119 teaches determining, by the primary printer 42A, that operations of the secondary printer 42B to assist the primary printer in its rasterization operations would eliminate the potential underflow condition, (See Step 506 in Figure 5A and Paragraph [0033]).

With regard to claim 13, Christodoulou'119 teaches receiving, by the primary printer, raster bits corresponding to the un-rasterized portion from the secondary printer (Step 542, Fig. 5B); and printing, by the primary printer, all raster bits corresponding to the print job (Step 544, Fig. 5B).

Allowable Subject Matter

4. Claims 6-10 and 16-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Claims 6 and 16 are considered allowable over the prior art of record since prior art of record fails to show or fairly suggest responsive to identifying, the primary printer calculating a number of secondary printers of the multiple printers to communicate respective un-rasterized portions of the print job to respectively rasterize, the secondary printer being included in the number, the un-rasterized portion being included in the respective unrasterized portions; not rasterizing, by the primary printer, any of the respective un-rasterized portions; wherein communicating further comprises, the primary printer sending the un-rasterized portions to respective ones of the number of secondary printers; and wherein receiving further comprises, receiving, by the primary printer, raster bits corresponding to the respective un-rasterized portions from respective ones of the number of secondary printers, as described and connected in independent claims 1 and 12.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 7202964, US Patent No. 6914692, US Patent No. 6100998, US Patent No. 7061649.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAWRENCE E. WILLS whose telephone number is (571)270-3145. The examiner can normally be reached on Monday-Friday 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on 571-272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/King Y. Poon/
Supervisory Patent Examiner, Art Unit 2625

LEW
December 5, 2008